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ABSTRACT

The basic tenet of this paper is that the difference between black and white children on IQ measures is not due to genetics but describes the cultural distance between the two groups. The cultural distance approach is described as an amalgam of the environmental and social psychology points of view. It holds that any subculture operating according to principles not present or equally operative in the majority culture processes functional information differently from the majority culture. Therefore, minority performance on tests based upon and validated by the majority culture will show response patterns different from the norm. These patterns are indicators of what is present in the tests that is salient to each subculture and to the majority culture. The tests, however, are not responsive to what is salient to the specific minority subcultures but absent in the majority culture. Thus, bias is assumed to be present in all standardized IQ tests. Evidence from the United States and around the world shows that multicultural societies must, and for the most part do, interpret standardized IQ scores of minority individuals in a different light from those of majority individuals. (CMG)

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The Cultural-Distance Approach: A Model for Analysing Black-White Performance Differences on Measures of IQ

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Running Head: The Cultural-Distance Approach

UD023 329

Abstract

The Cultural-Distance Approach: A Model for Analysing Black-White Performance Differences on Measures of IQ

The stance of the present investigator is an amalgamation of the environmental (nuture) and historical (social psychology) points of view with the addition of current knowledge in the fields of socio-biology and developmental psychology. This view, the Cultural-Distance Approach, briefly stated is: a sub-culture's distance from the major culture, on which the test questions of an IQ test are based and validated, will determine that sub-culture's group sub-score pattern in relation to the sub-score pattern of the norming population. "Cultural distance" is defined and explained in the prime tenet of the cultural-distance perspective: Any sub-culture operating according to principles not equally operative in the major culture, not existing in the major culture, or operating without the benefit of a principle operative in the major culture will be assumed to be attending to, processing, storing, retreiving, and/or practicing functional information not exactly like that of the major culture. Therefore minority member performance on tests based and validated on the major culture (or even validated on members of the society according to percentage representation of all sub-cultures in the super-culture) will show characteristic patterns of group responding different from those of the norming sample. These response patterns are indications of what is salient to each minority sub-culture on the tests and within the major culture, and what is not. The tests are not responsive to what is salient to the specific minority sub-cultures but absent in the major culture however. Thus bias is assumed to be present in all standardized IQ tests.

The Cultural-Distance Approach: A Model for Analysing Black-White Performance Differences on Measures of IQ

Introduction

The purpose of this paper is to examine the sociological and environmental determinants of group differences on measures of IQ. Specifically the difference in performance of Black and White school age children is to be examined. The basic tenet of this paper is that the oft recorded difference between groups of Black and White children is not the result of racial genetics but describes the cultural distance between the two groups.

The recorded difference in Black and White scores on standardized IQ tests is one of the most discussed, and yet unresolved, issues extant in psychology today. Many explanations for this phenomenom have been posited.

Biological Accounts

For example, Jensen (1969) has suggested that genetics play a central role in producing these differences. He argues that a "developmental lag," genetically determined, causes Black children to perform about two years below White children of equal chronological age. Jensen explored the Black-White difference in some detail. In one study (Jensen, 1977), he divided a White sample into two sub-groups in order to control for cultural differences: one consisting of subjects who equalled the total White sample regarding the mean and standard deviation, and one comprised of lower scoring Whites from the total sample that equalled the mean and standard deviation of the total Black sample. He labeled this second group a "pseudo race."

Jensen found that the difference between the "pseudo race" sub-group and the sub-group equalling the whole White population was the same as observed between

the total Black sample and the total White sample. From these results he argued that the difference between the two racial groups could not be explained by cultural differences between the races. The significant RxI (Race by Item) interaction he obtained in his total race comparisons could not be interpreted as bias in the test because a similar interaction was discovered between the two White sub-groups. However, Jensen is aware of a possible flaw in his conclusion, and thus he states that "the only counter hypothesis to explain these results is that the lower scoring Whites in the pseudo race comparison differ from the higher scoring Whites in the same way that Blacks differ from Whites, because the low scoring Whites and the majority of Blacks presumably are both culturally disadvantaged and therefore share the same item biases."

This of course is a very real possibility. By the very act of matching a sub-group of White subjects to Black subjects on test performance, Jensen may have been de facto matching the two populations on the environmental and sociological factors which would distinguish these two groups from the higher scoring White sub-group. Unfortunately, Jensen did not pursue this line of reasoning. One thing is for certain however, racial genetics could not have caused the equivalency of the Black group and lower scoring White sub-group on the dependent measure. Jensen does not propose an answer to this dilemma either. Jensen, in refuting "cultural difference," raised more questions than he answered.

Conwill (1980), in discussing Jensen's research, picks up the "culturally disadvantaged" argument negated by Jensen on the grounds that where there is no physical impairment there is no mental impairment. Conwill suggests that although Jensen believed that theoretically a boost of 20 to 30 IQ points was possible for children moved from extremely deprived environments to good or average environments, Jensen however, stated that he could find not a single case report of a

child being given a permanently superior IQ by such means. Jensen therefore concluded that environmental manipulation could only lead to large differences in IQ scores when the original environment is extremely inadequate and that the child typically described as "culturally disadvantaged" does not live in such an extremely retarding environment. In effect Jensen said the difference between the environments of the middle-class and lower-class child was not important. As "proof" of his conclusion, Jensen cited physical height saying: "when there are no great nutritional and environmental deficits (for growth), the differences (in IQ scores) are hereditary."

Herzog, Newcomb, and Cisin (1972), in a research paper titled "But Some are More Poor than Others: SES Differences in a Preschool Program," did however show that factors other than the nutritional and environmental deficits posed by Jensen, produce deleterious effects on IQ scores. Their study dealt with a preschool enrichment program and its effect on children of families labled as living in poverty. The group of primary interest to this paper is the experimental group (EG). The mean income of families in this group was $3,360, with a range of about $1,000 to $5,770. Their findings indicated that "a broad control for income does not control effectively for socio-economic status" within low-income populations. The analysis of their findings for the two-year nursery school program showed significant variations in test scores and in patterns of IQ change related to SES levels within this very low-income group.

Herzog et al (1972) also divided each group, the experimental (EG) and control (CG), into high and low socioeconomic status (SES) subgroups based on a combination of mother's education and people to room ratio. Further each group was divided into high and low initial IQ (IIQ) subgroups based on Stanford-Binet scores given prior to the interventions. Thus, four new subpgroups from the original groups were created: (1) Hi-SES-Lo-IIQ, (2) Hi-SES-Hi-IIQ, (3) Lo-SES-Lo-IIQ, (4) Lo-SES-Hi-IIQ. When the original experimental group was reanalysed, results indicated

that the Hi-SES-Lo-IIQ sub-group showed significant gain from the preschool enrichment program, and sustained this gain.

These results show that categorizing children in gross classes based on family earned income alone is not sufficient for a full understanding of differences in IQ scores between groups. Also, factors other than nutritional and environmental dificiencies must have been at work in these childrens environments, for it was the Hi-SES-Lo-IIQ students in both groups who scored the lowest on the initial IQ testing (IQ = 75), but the Hi=SES-Lo-IIQ students in the experimental group who gained the most (IQ=107) and regressed the least on the follow-up (final IQ = 98).

As will be emphasized later in this paper, the physical environment is not the only, or even the most important, environment empacting on the intellectual development of the child. The behavioral patterns and coping stategies of the parents of the most improved children in the Herzog et al. (1972) study were very different from the poor parents of the other children in the study. For one thing, the most improved children had parents who were more self-reliant than the others; they did not borrow from relatives and friends on a regular basis in order to survive. These parents also tended to keep their living quarters in better care. They were thus, perhaps as not discouraged by and resigned to their condition: perhaps they were not as <u>distant</u> from main-stream values and perceptions as were the other parents, and therefore their children were more programed in a fashion enableing the to adapt to and learn from the super-culture-directed learning environment (the School).

Also arguing against the biological explanation of racial IQ differences is the fact that significant increases in group IQs have been witnessed within a single generation, far too short a period of time for drastic genetic changes to have taken place. The national mean IQ in Japan rose 7 points on translated versions of the WISC and WAIS in the one post World War II generation and the mean of IQ for Japanese youngsters in 1975 on the WISC is the highest national norm in the world (Mohs, 1982), outperforming the United States and Western Europe by a significant degree (U.S. average = 100). Blacks in America also show significant intra-generational gains. Between 1981 and 1982, Black's average performance on the Scholastic Aptitude Test (SAT), verbal section, rose nine points and mathematic scores for this group rose four points (Berry, 1982). It is also significant to note that while Black norms were rising on the SAT between 1976 and 1982, White scores were declining.

The genetic (heritability) theory of IQ has also been attacked on methodological grounds. Hardy, Welcher, Mellits, and Kagan (1976) found that four categories of error, in addition to lack of knowledge may contribute to the aforementioned differences: (1) failure to comprehend the entire question; (2) failure to understand because of speech perception-enunciation differences between the examiner and child; (3) an incorrect frame of reference, a difference between the child's experience and that upon which the question was based; and (4) inability to verbalize (possibly due to limitations in the vocabulary of the child). The child might seem to know an answer but be unable to communicate it with the appropriate words.

Hardy et al. (1976) hypothesized that probing would eliminate all errors other than those due to lack of knowledge, thereby giving a truer picture of intelligence. They administered the WISC to a group of 200 inner-city children (88% Black), and then after a period of rest:

(a) Selected questions from each (of five scales) were readministered and scored, in the standard manner. (b) A structured set of probing questons, designed to ascertain the reason underlying the child's response, was then administered. If the readministration response was incorrect, an attempt was made to classify the child's error. (c) The final response, at the completion of the probing questions, was scored for correctness for that particular child.

Minor changes in procedures were made in the readministration of the two other subtests to insure chat the child understood the task. For Digits Backwards, the child's name was reversed to familiarize the child with the requirement of the task, and for Picture arrangement, the child was asked to tell what he was doing as he arranged the pieces. There were no follow-up questions.

Although the authors state that their study was not designed to provide an estimate of global IQ scores that might have resulted from readministration of all the WISC questions, instead was designed to show that "some children are penalized for providing reasonable replies to questions, but answers that, according to the Manual of the test, are unacceptable and receive no credit," The data strongly suggests that much of the lower group scores of Blacks might be accounted for by these categories.

Examples of some readministered questions and answers are enlightening. In the Information subtest questions 1, 4, 5, and 6 were readministered.

> Question 5. "What must you do to make water boil?" At the time of readministration 47 of the 200 children made error. By rephrasing the question, "How do you boil water?" only 17 continued to obtain no credit.

In the Comprehension Subtest five questions were readministered.

> To question 1, "What is the thing to do if you cut your finger?" Most of the children (148 of 200) initially gave the correct response: "Put a bandaide on it." Thirty-seven were partially correct, and 15 were incorrect. Of the partially correct answers, 28 (76%) were considered to be frame of reference errors. A frequent response was "Go to the hospital, "which yielded a partial score of 1 point. When the additional information was provided that it was "a little cut," the correct answer was given by all but two children. In most instances, where the child had responded "Go to the hospital," he had been treated at a hospital for a prior injury. Of the 15 incorrect responses (0 score), 14 were attributed to failure to comprehend the question: "It bleeds" and "with a knife" were common responses. Upon further questioning, it was apparent that all but two children knew the correct answer.

Living in a poor neighborhood where many cuts are the result of violent acts commited with knives and that require emergency medical aid, the original answer given by these children can be seen as "intelligent." It should also be remembered that being poor also correlates with lack of private medical services; poor people receiving their primary health care not from family doctors but from hospital emergency rooms. Thus the answers are "intelligent" when viewed from their particular social circumstances. It is also reasonable to expect fewer households having the discretionary cash to purchase band-aids in a slum area than in more affluent areas.

> Question 3, "What should you do if you were sent to buy a loaf of bread, and the grocer said he did not have anymore?" Most of the errors resulted from an incorrect frame of reference. A number of the children who failed by test manual criteria (Go to another store) replied "Go home." Further questioning revealed the reasonableness of this response, as some children indicated that they required permission from the parents to go elsewhere; and in some cases, money was required, as food was purchased on credit. Some children indicated

> that they would be punished if they went elsewhere without permission. Others reported that there were no other stores in the area, or that they were not allowed "to cross the big street alone." A few said that their mother would bake bread.

All of these answers are intelligent when answered by a child in an urban Black environment, yet they are incorrect by the WISC Manual. The question seems to be that even though one may not detect face validity problems from a simple reading of the test items (Jensen, 1976), does this in fact mean that they do not exist? The above described experiment tends to argue that many intelligent responses are considered incorrect simply because the culture of the child differs from that of the main body of society in which the child's sub-society is a part.

In the Vocabulary sub-test, eight questions were readministered. Two examples should be sufficient.

> Question 9, "What is fur?" yielded 18 correct 2-point, 96 1-point, and 86 no credit answers among the 200 children. The most frequent answers "fur coat" and "fur hat" are both no credit responses. The follow-up question "where does it come from?" produced the correct response from some children. While the majority of no credit responses appeared due to lack of knowledge, 26 (30%) had problems verbalizing the answer. At the completion of the follow-up questions, the frequency of no credit responses had decreased from 46.3% to 27.5%.
>
> Question 11, "What does join mean?" elicited only nine correct 2-point scores on readministration. About two-thirds of the children lacked the knowledge necessary for a correct answer, and the remaining children made auditory preceptual errors. They heard "join" as "Jo Anne," "John", or "Joy." They responded to the word they heard, but when the psychologist repeated the question, many did not know its meaning. Of the 135 originally obtaining a partial score, 127 did not improve. They tended to use "join" in a phrase or sentence, such as "join a club," indicating a partial familiarity with the word but inability to use its more abstract meaning, a verbalization problem.

These two questions, and the children's responses to them, demonstrate another problem in comparing different sub-cultures on standardized IQ tests. That problem is the different ways words, phrases, and sentences are pronounced and used by the different sub-cultures. Black urban children who for the most part are only second and third generations removed from rural southern backgrounds pronounce

words differently, and therefore attribute different meanings to such words, than educated northern and eastern psychologists. Additionally, the usual mode of expression and forms of communication of these youngsters may be significantly different than those forms of communicating deemed "proper" by test constructors and the super-culture in general.

Sociological Accounts

Should cultural variance be the true cause of the reported differences, it would follow that the variations in IQ test scores should be greater between those groups further removed from the general culture and the White standard, than those that are more integrated with that standard. This is indeed the case. McShane and Plas (1982) conducted a study on 142 American Indian children which was divided into two subgroups, traditional and acculturated. Their study hypothesized the existence of a unique pattern of Weschsler Scale Indian performance that differs from that found in learning disabled groups or within the norming (White) group. The results were as expected. It was found that the typical Indian child possesses relatively superior visual-perception abilities and depressed language skill as assessed by the Wechsler.

But more important than the identifiable Indian profile was the fact that the traditional children evidenced the Indian pattern of recategorized Weschsler subtest performance, while the more acculturated groups did not. On the basis of the verbal-performance IQ ratio, 159 Indian children, drawn from three sources (a group referred for psychological services because of educational difficulties (N = 105), a group referred because of hearing problems (otitis media) (N = 20), and a group referred for giftedness screening (N = 17)) were assigned "traditional" or "acculturated" status. A differnece of 9 points was considered significant for Indian populations, based on previous research (McShane, 1980). Those children with more

than a nine point difference in performance and verbal IQ were classified as traditional; those children with a nine point or less difference were considered acculturated.

In order to ascertain the validity of the relationship between the nine-point Wechsler verbal-performance IQ difference and level of acculturation for this particular study, McShane and Plas (1982) inspected the households or measured the acculturation of the mothers of 37 children. Of the gifted group, six had a Wechsler verbal-performance difference of nine points or less. These "acculturated" Indian children each had one White parent, or had parent(s) raised in the city, or were raised in a foster home. The 11 students of this group achieving a verbal-performance difference in excess of nine points had both Indian fathers and mothers and both child and parents had significant reservation contact.

Fifteen of the mothers with children in the hearing problem group were given a test of acculturation developed by the principle author, the Traditional Experience Scale (TES). Children of those mothers who scored as highly traditional on the TES had a mean verbal-performance score difference of 25 points. The mean difference for the children of moderately traditional mothers was 16 points. And the difference for children of low traditional mothers was 0 points.

McShane and Plas conclude that acculturated Indian children exhibit smaller Wechsler verbal-performance differences and a less identifiable Indian sub-scale pattern than do the traditional-rated children. From a cultural distance perspective the Wechsler scales performance of Indian children can be seen as good a measure of Anglo-acculturation as more traditional methods, and not simply as a measure of intelligence. McShane and Plas come to a like conclusion when they ask that an explanation be found which integrates the Indian's child traditional heritage into an understanding of his "intellectual style."

Not only is the fact of multiple sub-cultures a problem for test construction and interpretation in the United States, it presents a problem for other multi-cultural western societies as well. Lieblich and Kugelmass (1981) have illustrated that Israel has the same problem with her Arab minority. These authors found that the Arab child in Israel shows a pronounced verbal over performance scale score difference on an Arabic translated version of the Wechsler. The characteristic difference is consistent up to the age of 12 in these children.

Lieblich and Kugelmass were also correct in noting the fact that the relative Verbal superiority of the Israeli Arab school children is the result of comparison with Israeli Jewish children. This is of importance because, in comparisons with other groups, the Jewish group is indicated by its relative Verbal IQ superiority. The authors conclude that the Israeli Arab profile would seem to be an even more extreme form of the high relative verbal sub-score pattern than the celebrated Jewish pattern.

Lieblich and Kugelmass struggle to explain these circumstances and dismiss the genetic for the environmental interpretation. They ask two related questions in the search of an explanation: "what are the factors involved in producing the Verbal-superiority profile in the first place, and what are the factors which may account for its disappearance toward adolescence?" They note that genetic theories have been suggested to account for a "possibly related phenomenon of perceptual deficit" among American Blacks and that maturational differences have been offered to explain "similar findings" when comparing the intellectual achievements of boys and girls. They however argue that a genetic explanation could not be plausible maintained considering the dissapearance of the specific sub-scale pattern in Arab children at age 12. A 1975 study (Lieblich, Kugelmass, and Ehrlich, 1975), in which Jewish and Arab children, aged 4 to 7 living in the same city and having similar SES backgrounds, evidenced very similar patterns and levels of achievements would negate a maturational hypothesis.

Lieblich and Kugelmass therefore suggest that the Arab culture and the environment of the Arab child be examined in order to provide answers to their previously stated questions.

Australia is another westernized nation with a sizable minority population. Much attention has been given to the cognitive styles of the two racial groups on that continent. Knapp and Seagrim (1981) summarize the latest thinking on this issue when they state that recent psychological research suggests that Aboriginies are disadvantaged in the European style school system because they (the Aboriginies) use problem-solving strategies that are different from those expected by the shcools and those generally used by children of European descent. They claim that Europeans typically process information serially and make use of abstraction while Aboriginies are simultaneous processors of information and concrete thinkers. They further stress the "appropriateness" of the European form of thinking for reading and mathematic skills - skills highly prized by western schools and culture.

Knapp and Seagrim conclude that "the most economical explanation for these presumed racial differences in cognitive style is that they result from differences in cultural pressures undergone by, and the life experiences of Aborigines and Europeans."

Historical Accounts

It should be clear from the foregoing that environmental explanations of group differences are the rule, not the exception. Why not so in America? Could the emphasis on heredity in America be a result of the capitalist formulation of labor as is advocated in Marxist doctrine? Levidow (1978) spells out what he terms, "A Marxist critique of the IQ debate." In it, he describes the quantification of intelligence as being the result of capitalist historical development. He argues that the use of IQ test is in realty a ploy of "racist" to scientifically

institutionalize capitalist aims through the use of science. IQ testing is seen as a way of controlling labor. Levidow argues that through the reification of the trait of intelligence capitalism creates for itself certain social classes which can be easily channelled into preordained labor positions. Levidow proposes that by mystifying abilities, capital is able to force deficits in performance or learning into the being of inferior persons. Society is not to be held responsible for the low social standing and exploitation of these people because it is the poor genetic make-up of these types which keep them in their positions of servitude, not the inaction or reaction of the ruling classes. Levidow's proposition will be interpreted in a broader sense (trans-marxist) later in this paper.

There are those in the field of social psychology other than marxists, who believe that the science of human behavior is an historical endeavor. In his article, "Social Psychology as History," Gergen (1972), argues that social psychology is primarily an historical inquiry. He states that unlike the natural sciences, social psychology deals with "facts" that are largely nonrepeatable and that change as a result of the progression of time. He asserts that principles based on human interaction cannot easily be developed that will prove useful over time because the underlying facts on which the principles are based will change as the times change. In the final analysis, states Gergen, social psychological knowledge cannot accumulate in the usual scientific sense because knowledge of human interaction is a prisoner of its time and setting.

So here we have delineated two ways in which social science in general, and psychology in particular, are intertwined with history. One is the effect the times we live in have on scientific propositions and inquiries, which has been labelled "zeitgeist," and the other is the evolution of human behavior over time. The first is the historical effect the Marxists deal with, albeit they use its arguments in a restricted sense.

The second effect of history is changes in the subjects under study. This too is an historical reality. Jones (1971) has captured the essence of both historical effects in his review concerning the use of IQ tests form 1870 to 1930 to prove Blacks inferior.

Jones demonstrates the effect of the zeitgeist on scientific inquiry during this period. He theorizes that somewhere between Reconstruction and 1930 the climate of thought moved from one of innate equality of the races to one of Black inferiority. Some of the reasons behind this change listed by him are: (1) Southern bitterness over Reconstruction, (2) Northern Capitalist interest in the South, (3) the desire of Whites to put differences aside and reunite the country, (4) Social Darwinism, (5) the rise of imperialism, (6) the "yellow peril" - a militant Japan, and (7) the "red scare."

Jones goes on to show how the different kinds of "tests" these scientists used (the sociological, the psychological, and the physiological) were in many cases loaded with methodological flaws, produced contradictory results, and how these results were explained away oftentimes or suppressed when they did not agree with the prevailing zeitgeist. Jones concludes that a vicious cycle was joined, the White scientists being adjoined with the public in this regard: "Whites believed Blacks to be inferior. Therefore white scientists believed them inferior and their experiments 'proved' them to be. The proof offered by these scientists reinforced the beliefs of the general white population, and so on it went." A by-product of this process was the fact that a number of Blacks came to believe in their inferiority too. The Blacks therefore became participants in a tragic drama, maintaining a self-fulfilling prophesy of lowered achievement through lowered aspiration.

The work of Jones briefly touched on the U.S. Army testing in the period he studied. A more recent examination of World War One Army testing methods and results (Bronfenbrenner, 1980) demonstrates how the zeitgeist of the period worked

to perpetuate itself. These tests were used at the time to "prove" the inferiority of the immigrant population from Eastern and Southern Europe and their offspring. This was a result of the general feeling of the U.S. public that the flow of immigrants form the "underbelly" of Europe should be halted, or at least drastically reduced. By proving these populations deficient in certain areas such as morals (the Black-Hand Society or Mafia was getting a great deal of press coverage) and intelligence, Congress was able to eventually reduce the flow of such "undesirable elements." Today however, the descendents of these "genetically inferior types" are considered equal in intelligence with other Whites. Here clearly is an example of both forms of historical-psychological interaction in the process of change: (1) the zeitgeist and (2) the improvement of the test scores of Whites from Eastern and Southern Europe living in America.

Apparently both the zeitgeist and the social reality as quantified by test scores can change. One area in which test scores for Blacks have improved to a level equivalent with Whites is that of self-evaluation. Adam (1978) argues that what is conceptualized as self-esteem has changed as rapidly and as drastically as the "real" rise in Black esteem (an example of the zeitgeist and the quantifiable changing in tandem). Taylor and Walsh (1979), along with other writers (Fu, Korslund, and Hinkle, 1980; Pettigrew, 1978; Simmons, 1978), believe that there has been real gain in the self-esteem of Blacks. Fu capsulizes the recent history of the measurement of Black self-esteem as follows:

> Until the late 1960's it was an axiom of social science that white discrimination and segregation depressed and debilitated the psyche of the average black person in this country ..., but contemporary research is nearly unanimous in reporting either no racial differences in self-esteem or differences favoring blacks over whites...

It would seem that the social reality in this area has changed. Just as IQ tests scores of the descendants of the Europeans from the eastern and southern areas of that continent have risen to equal those of their fellow Caucasians, so have

the measures of self-esteem of the Black risen to equal that of the White. It appears that Blacks have changed, or are changing, the social reality of their performance on measures of self-esteem. The "vicious cycle" which Jones described above seems to be on the wane. The zietgeist is also different today, with more Blacks and Whites rejecting a deterministic interpretation of IQ scores.

So the question remains, "why have not the IQ test scores of Blacks risen to the national norms?" As cited earlier (Berry, 1982), Black norms on certain intelligence and aptitude tests are rising slowly and by small amounts.

The Cultural-Distance Approach

This returns us to a previously discussed topic and the main premise of this paper, that is: a sub-culture's distance from the major culture, on which the test questions are based and validated, will determine that sub-culture's group mean in relation to the norm mean of the test as a whole and that sub-culture's sub-score pattern in relation to the sub-score pattern of the norming population. So the problem comes down to defining "cultural distance."

This stance eliminates the need to consider bias in order to improve the test. Bias will henceforth be an accepted fact in testing. Any sub-culture operating according to principles not equally operative in the major culture, not existing in the major culture, or operating without the benefit of a principle operative in the major culture will be assumed to be attending to, processing, storing, retreiving, and/or practicing functional information not exactly like that of the major culture. Therefore tests based and validated on the major culture (or even validated on members of the society according to percentage representation of all sub-cultures in the super-culture) will show characteristic patterns of group responding different from those of the norming sample. These response patterns are indications of what is salient to each minority sub-culture on the tests and within the major

culture, and what is not. The tests are not responsive to what is salient to the sub-culture but absent in the major culture, however.

The above underlined statement is both a definition of "cultural distance" and an explanation of normative differences between social-culturally distinct groups. As a definition it provides a base from which to investigate the reported differences between groups in the literature, and as an explanation, it provides the theoretical footing from which predictions and interpretations may be made.

The sub-test scores that comprise the characteristic response pattern can either be elevated or depressed as measured by the norming sample. The evevation of the Arab sub-culture group norm as compared to the major-culture norm in Israel (Lieblich and Kugelmass, 1981) in regards to Verbal ability on the WPPSI, demonstrates an Arab distance from the major-culture norm (Jewish) in Israel that shows the relative importance of Verbal patterns of behavior in the Arab culture. Lieblich and Kugelmass report:

> Many cultural analyses have stressed the central role of the Arabic language in both oral and written form on its users... Some even imply that there may be disproportionate attention paid to the language at the expense of other aspects of communication.

In regards to the depressed Arab Performance score, the same authors accurately state that Arab attitudes toward time and speed may be causal factors involved here. "Speed is from the devil," is a popular Arab saying. Lieblich and Kugelmass note that Arabs are accustomed to working in a relaxed and unhurried fashion (as they assume most "relatively less modernized societies" are), while the majority of the Performance sub-tests require fast reactions and these sub-tests penalize slow responses, even when correct.

While the above analyses are clearly ethnocentric in orientation, they at least manage to escape the heredity-genetic trap of pre-determinism. Lieblich and Kugelmass are able to see difference qualitatively and not strictly quantitatively.

All the other examples of differences in test scores can be similarly analysed, and most are analysed in just this way. The cultural-distance approach would even predict the disappearance of the relative verbal superiority of the Arab child over his Israeli Jewish counterpart at about the age of 12. This is around the age of manhood in both the Jewish and Moslem religious systems. At this age many Arab children assume an adult position in life. They acquire jobs and begin to acquire the performance habits which will enable them to support themselves and a family. In Israel, the performance standards for employment are Jewish and not Arabic, therefore at this age (12-13 years), the child begins to become more adept at quick responding relative to verbal responding. The cultural distance between the two groups is narrowed by environmental and social forces.

Similar analysis of <u>all</u> cross-cultural comparison data could be accomplished from a cultural distance perspective. Predictions could be made concerning ways of improving the areas of "deficit" in minority-cultures and about the factors contributing to observed differences. Many scientists throughout the world are doing just such analyses, even though many do so without awareness of cultural distance as the underlying cause of all observed group performance difference. When these scientist call for an examination of the sub-group's environments and societies and cultures, they direct their attention to cultural distance.

In contrast, American scientists, as regards the "Negro," seem peculiarly attached to the genetic superiority/inferiority line of reasoning. As Jones (1971) remarks:

> Those cases where the Black proved superior to Whites (ex. rote memory, making rhymes, naming words, and in time orientations; p. 13) were explained away. It could not be otherwise. Despite the neutral position they attempt to assume, most of the scientists believed Blacks to be inferior to Whites. Where their evidence appeared to contradict these beliefs, they sought to rationalize it away. For example, they argued that Blacks seemed to excell whites only in those tasks that did not really matter. Reuther, writing in 1917, summed up much of the belief of the social scientific community of the time when he said, "Popular

> assumption of a difference in the mental capacity in the races seems to be borne out in part, at least, by the results of such psychological and educational studies as have been undertaken." A neater statement of the relationship of the beliefs of society and the conclusions of its scientists would be hard to find.

It is time that the American zeitgeist changed, just as the American social reality is changing. Instead of considering racial groups as distinct and separate populations, Americans must come to grips with the continuing revelations on this score by social-biologists. Beliaev (1982) states;

> The human beings populating our planet belong to the single polytypical species Homo sapiens. The racial differentiation of humanity and, even more so, national boundaries have not created mechanisms of reproductive isolation, with the consequence that the exchange of genes extends throughout the entire human race, resulting in a single genetic pool for the species, constituting its basic wealth and the foundation in nature for further progress and flourishing.

Cultural distance and biology. Robinson (1982) estimates that in the United States, 95 percent of all Black people have some admixture of European genetic stock while at least 27 percent of all White people carry some African genes. Based on these facts, is genetics enough anymore to explain Black-White differences on IQ tests? Robinson, considering these facts, asks the telling question, "which genes misbehaved?"

When performance differences and sub-scale patterns are approached from a cultural distance perspective, the latest discoveries in social-biology are not antagonistic to the understanding of these differences and patterns (as is social-biology and the racial-genetic theory), but agonistic. For example, the social-biology contention (Hamilton, 1964) that those traits most associated with fitness have low heritability seem strongly at odds with the racial genetic viewpoint that the proportion of genetic contribution to intelligence (surely a trait associated with survival in mankind-fitness) now stands at 68 to 70 percent (Das, 1977). Social-biology would argue that any trait of survival value (fitness) such as intelligence would quickly spread throughout the species via the process of

natural selection. Thereafter, any differences in phenotype observed between sub-groups belonging to that species would be the result of environmental, and in the case of homo sapiens, social influences. The cultural distance approach not only agrees with this prediction, neigh, it is axiomatic, as can be seen in our definitional/explanatory statement, reprinted below:

> Any sub-culture operating according to principles not equally operative in the major culture, not existing in the major culture, or operating without the benefit of a principle operative in the major culture will be assumed to be attending to, processing, storing, retreiving, and/or practicing functional information not exactly like that of the major culture.

Difference between sub-cultures are assumed to be the result of different cultural values and also as the result of each culture's symbolic interpretation of its environment. Cultural distance as a perspective incorporates the latest social-biological knowledge better than does the racial-genetic perspective.

American psychologists have been trying to fit a square peg into a round hole. They have been quantifying when they should have been qualifying. They have been trying to reduce to a single scale, abilities and social-cultural propensities that are different in their very natures. Levidow (1978) takes a quote from Marx that illustrates this prime error.

> What does a solely quantitative difference between things presuppose? The identity of their qualities. Hence, the quantitative measure of labors presupposes the equivalence, the identity of their quality.
>
> Karl Marx
> (Grundrisse, p. 173)

If we replace the phrase "measure of labors" in the above with the phrase "measure of IQ scores" the statement summarizes the position under which present advocates of universal testing operate. But what is the IQ score measuring: what is intelligence. Jensen (1969) made no claims to know what he was measuring. He reasons that we need not know; we need only know that it correlates highly with income, school performance, etc. Well, so does being a member of the dominant

group correlate highly with income, school performance, and IQ score. Yet who would proclaim that the gene carrying skin color also carries information on social status, school performance, or even "G" for IQ.

What is expressed in the conclusions of the hereditarian view is a very basic philosophical mistake: an error of deductive reasoning. While the major premise of their argument is correct, the minor premise and the conclusion are false. Their logic is as follows:

Major Premis: Quantitative differences presuppose qualitative sameness.

Minor Premis: IQ scores measure and quantify differences in intelligence between culturally different groups.

Conclusion: Therefore, culturally different groups possess different amounts of the same quality.

But if you do now know what intelligence is, or you presume to know what intelligence is (i.e. the ability to learn) but do not measure the same quality equally for both groups, your minor premis, and therefore your conclusion are invalid.

Cultural distance and test bias. Ignoring the ignorance or lack of concern about the essence of intelligence for awhile, let us, for the moment, concern ourselves with the equivalent measure of this concept in culturally different groups. Hunter and Schmidt (1976) in a review devoted to the "Critical Analysis of the Statistical and Ethical Implications of Various Definitions of Test Bias," concluded with the statement: "we feel that we have shown that any purely statistical approach to the problem of test bias is doomed to rather immediate failure." They went on to state that they felt that there is no way that the hereditary-environmental dispute could be objectively resolved through statistical means.

Cole (1973) argues persuasively for a definition of a culturally fair test proposed by Darlington (1971) -Darlington's Definition #3. Hunter and Schmidt (1976), no matter their own conclusions on the problem of test bias as delineated above, describe Darlington's third definition best. They present it as follows:

> If X is the test and Y is the criterion and if C, the variable of culture, is scored 0 for Blacks, 1 for Whites, then Darlington's Definition 3 can be written as follows: The test is fair if
>
> $$r_{x c_0 \cdot y} = r_{x c_1 \cdot y} = 0.$$
>
> His argument for this definition went as follows: The ability to perform well on the criterion is a composite of many abilities, as is the ability to do well on the test. If the partial correlation between test and race with the criterion partialed out is not zero, then it means that there is a larger difference between the races on the test than would be predicted by their difference on the criterion. Hence the test must be tapping abilities that are not relevant to the criterion but on which there are racial differences. Thus, the test is discriminatory.

What Darlington's Definition #3 is saying, when carried to its ultimate conclusion, is that a test can only be fair when all predictors in a multiple regression equation of the criterion are known and considered. As Hunter and Schmidt explain: "That is, Darlington's definition can be statistically but not substantively evaluated in real situations."

So now we arrive at another impass. If intelligence can not be defined, how are we to construct the perfect multiple regression equation? And if intelligence is defined as some global concept such as "adaptive behavior" or "the ability to learn," and if we could come up with some operational definition that would take note of all such behaviors, how would we decide of which measures to include in a test of this concept? Would we include all the measures? If we did that, the test would then be the criterion!

This paper accepts the definition proposed by Humphreys (1971) for intelligence: "the entire repertoire of acquired skills, knowledge, learning sets, and generalization tendencies considered intellectual in nature that are available at any one period of time." With this definition and the preceding paragraph, it becomes obvious that an unbiased test is an impossibility in a pluristic society. For as many distinct classes as there are in the society, so will there be that many different learning environments in which the members of those different classes learn

their "entire repertoire of acquired skills, knowledge, learning sets, and generalization tendencies considered intellectual in nature ...", each set unique.

But, as was stated earlier, the fact of bias is not really a problem if one considers differences in group norms, not as the quantitative measure of differing amounts of a single universally held attribute, but as an indication of qualitative differences between groups as a result of cultural distance.

From this perspective, it is possible to view an IQ norm for a specific cultural group as an indication of that group's integration into the dominant fabric of society on whose "learning sets" the IQ test is constructed. It is not to be considered an indictment of the genetic viability of said groups. And this leads to a most important and cogent realization with great explanatory capability: the difference in group norms between Blacks and Whites is not a racial issue, it is a cultural issue.

This would explain why, even though the difference in Black and White group norms are usually between .5 and 1 standard deviation apart on the two most widely used IQ assessment tools, the Stanford-Binet and the Weschlers, individual Blacks and Whites score in all score ranges on either test. This is so because, although the majority of Blacks and Whites may acquire the learning sets of their respective communities, some Blacks will be more fully integrated into the mainstream culture while some Whites will be more distant from this super-culture.

The son of a Black lawyer scores higher on the WISC-R than does the daughter of a White coal miner, surely not because lawyers are genetically superior to coal miners, but because lawyers, and therefore their sons, are more fully integrated into the mainstream of society than are coal miners, and therefore their daughters. Or, to reverse the statement, one could say, with equal strength, that the lower scores of the White coal miner's daughter reflects her greater involvement in her own sub-culture than that of the Black lawyer's son in his own sub-culture, as compared to the super-culture. So this is the problem -cultural bias. There are

three solutions to cultural bias which should be explored.

One; all testing could be stopped. Jackson (1975) believes this to be the optimal decision. He argues that tests penalize minorities, supply inaccurate information to teachers and counselors, have a devastating effect on minority students' self-image, and in general assist the White establishment in preventing Blacks and other minorities from gaining proportional representation in the professions, decision-making positions, corporations, and other areas which are attained through the educational enterprise. Jackson further asserts, in the name of the Association of Black Psychologists, that "We need more than a moratorium now - we need government intervention and strict legal sanctions (against IQ testing)."

Bernal (1975), a past president of the Association of Psychologist for La Raza, adds that the payoff for students taking tests may be unevenly weighted against them. He sees the potential benefit of educational assessment and program evaluation and improvement simply not being exploited, yet the risks of having test results misinterpreted remain high. Bernal describes the present situation in testing as one requiring the practitioner to be held solely responsible for any biases. He sees this as simply a maneuver by test developers to escape responsibility. He would refocus the responsibility for test misuses onto the developers, calling for them to "disabuse themselves of the notion that all users of tests and test information in school settings can be adequately trained to the point at which psychometric jargon, such as the names of the tests, will no longer deceive them."

The points elucidated by Jackson and Bernal are valid but the end of testing would eliminate none of the problems raised. In fact, test usage has been beneficial for the more acculturated Blacks and other minorities; now the "exceptional" Black

or Chicano that scores high on entrance tests can no longer be denied entrance based on the personal preference of the employment officer or school entrance committee. In these instances, standardized testing is preferable to other assessment methods. As for tests results having "a devasting effect on the self-image of minority students," this does not seem to be the case (as review of literature states above).

Finally, hardly anyone in business, industry, or academia is convinced that test scores are reliable predictors of performance in isolation from the social learning history of the individual. An illustrative example is taken from The Graduate School catalogue of the University of Texas at Austin (1981-1983):

> Students who belong to minority or low-income groups or who because of a physical handicap have not participated in traditional educational experiences may find that their performances on standard tests (like the GRE) do not adequately reflect their ability for graduate study. If you feel that your scores or your grade-point average are not valid indicators of your ability, please explain your concerns in a letter to the Graduate Advisor of the program to which you are applying.

This example is an especially clear and forthright expression of the consensus that the overwhelming majority of colleges, professional schools, and industries hold regarding test scores for non-traditionally educated (enculturated) individuals. This is not to say that this fact nullifies the unfairness of these tests with non-majority members of society, it is however proof that these unfair instruments are not accepted at face value by those using them for entrance policies.

A second solution to test bias, which would bypass the first objection if implemented, is to devise reliable, validated test on each identifiable sub-culture in the population and use the appropriate test to the individual for evaluation. This, on first glance, seems like the ideal solution. But it is not.

As discissed earlier, social behavior is constantly evolving. In America there appears to be an evolution of society toward one super-culture. Should

tests be devised to account for each separate sub-culture now present in American society, all tests may be worthless to the next generation. Even the tests measuring the major-culture have to be constantly revised every decade or two.

Additionally, as was evident with the Indian population in the study by McShane and Plas (1982) previously cited herein, there was a difference in Wechsler scale patterns between groups of traditional Indian children and those who are more Anglo acculturated, with the score pattern of the more Anglo acculturated Indian children more closely resembling that of the major-culture pattern. How would these children be tested? It can be seen then, that sub-culture specific test construction and implementation is impractical.

The third option, is to reevaluate our conceptions of what IQ tests, national norms, group and racial differences mean, and to bring them more in line with social reality (the evolutionary movement of human behavior). IQ tests measure those things considered intelligent behavior by the test makers (McClelland, 1973). And since these tests makers are successful, educated persons who have come from and been educated by the major-culture, their idea of what is intelligent behavior is a reflection of what the society-as-a-whole considers intelligent.

This author believes that there is a legitimate basis for test construction, with certain reservations. Since what is important to functioning intelligently in the society-as-a-whole will determine how one operates in that society, an assessment of ones strengths and weakness as measured by the norms of that society can be very useful, both determining in which areas one is likely to be successful and determining in which areas one should practice the skills needed to improve performance if one chooses to adapt those skills competively to an area of personal interest. Test should however, not be used to denigrate, or even evaluate, a separate population solely on the bases of differences in score patterns, or

elevations and depressions, in comparison with the whole population (or other separate populations). Tests, should therefore, be used to evaluate and aid the individual. Tests used to determine group differences based on any premise other than "cultural distance" will lead only to invalid assumptions based on "valid" data. Harvard biologist Stephen Jay Gould agrees that this fact is too often overlooked by the "hereditarians." He is quoted by Mohs (1982) as saying:

> The hereditarians'...error...is to confuse within-group and between group behavior. The classic studies of heritable IQ..."are all within a single population. But variations among individuals within a group, and differences in mean values between groups are entirely separate phenomena. One item provides no license for speculation about the other. IQ could be highly heritable within groups, and the average difference between whites and blacks in America might still only record the environmental disadvantage of blacks."

Conclusion

This paper has brought together evidence from the United States and around the world that multi-cultural societies must, and do for the most part, interpret standardized IQ scores of minority individuals in a different light from majority individuals. Not only may such IQ protocols be indicative of intellectual functioning, with the minority subject, but may also indicate distance from the super-culture of the nation, and society, on which the test is normed. Whereas a White middle-class youngster who scores 80 on the WISC-R may be properly judged to be borderline in intellectual functioning, a poor Black child may be either borderline in intelligence or culturally-distant from mainstream values, perceptions, and knowledge (culturally-borderline) of the society-at-large.

It is our responsibility as clinicians to properly assess the-cultural background and specific learning history of each client along with any standard measures of intelligence prior to coming to any conclusion on the mental functioning of the

individual. It is also the added responsibility of Black psychologists to spread the knowledge we have concerning culture and its determinants on assesment performance to our own major-culture fellows in the profession, seeing that American psychology lags behind that of other industrialized nations in this respect. It is also our obligation to help mold in our future generations those abilities deemed important to the society in which they live in order to increase their potential competiveness; at the same time forcing the society to recognize the legitimacy of our special capabilities in order that we may truly be ourselves in this pluristic society. We must become bi-cultural, the future generation cosmopoliton in outlook. We must evolve beyond the present stage of Black awareness into a new ear of human awareness.

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